SONY

Mobile HD Snap Camera Handbook

MHS-PM1

▼CLICK!

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4-135-530-**11**(1) GB

Notes on using your camera

Types of “Memory Stick” media you can use with your camera

- For recording movies, it is recommended that you use “Memory Stick PRO Duo” media of 512 MB or larger marked with:
  - – MEMORY STICK PRO DUO*(“Memory Stick PRO Duo” media)
  - – MEMORY STICK PRO-HG DUO (“Memory Stick PRO-HG Duo” media)

  * Marked with Mark2 or not, either can be used.
- “Memory Stick PRO Duo” media of up to 16 GB has been confirmed to operate correctly with this camera.
- See page 24 for the recordable time of “Memory Stick PRO Duo” media.

“Memory Stick PRO Duo” media/“Memory Stick PRO-HG Duo” media
(This size can be used with your camera.)

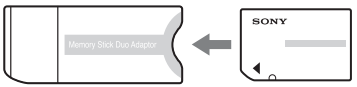
“Memory Stick” media
(You cannot use it in your camera.)

- “Memory Stick PRO Duo” media and “Memory Stick PRO-HG Duo” media are both referred to as “Memory Stick PRO Duo” media in this manual.
- You cannot use any type of memory card other than those mentioned above.
- “Memory Stick PRO Duo” media can be used only with “Memory Stick PRO” media compatible equipment.
- Do not attach a label or the like on “Memory Stick PRO Duo” media or a “Memory Stick Duo” media adaptor.

When using “Memory Stick PRO Duo” media with “Memory Stick” media compatible equipment

Be sure to insert the “Memory Stick PRO Duo” media into the “Memory Stick Duo” media adaptor.

“Memory Stick Duo” media adaptor



Notes on the battery

- Charge the battery before using the camera for the first time.
- The battery can be charged even if it is not completely discharged. Also, even if the battery is not fully charged, you can use the partially charged capacity of the battery as is.
- If you do not intend to use the camera for a long time, use up the existing charge and store the camera in a cool, dry place. This is to maintain the battery functions.
- For details on the battery, see page 71.

No compensation for contents of the recording

- The contents of the recording cannot be compensated for if recording or playback is not possible due to a malfunction of your camera or recording media, etc.

Internal memory and “Memory Stick PRO Duo” media back up

- Do not turn off the camera or remove “Memory Stick PRO Duo” media while the access lamp is lit, or the internal memory data or “Memory Stick PRO Duo” media data may be destroyed. Always protect your data by making a back up copy.

About changing the language setting

- The on-screen displays in each local language are used for illustrating the operating procedures. Change the screen language before using your camera if necessary (page 21).

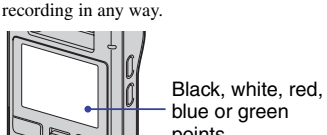
Notes on recording/playback

- This camera is neither dust-proof, nor splash-proof, nor water-proof.
- Before you record one-time events, make a trial recording to make sure that the camera is working correctly.
- Be careful not to get the camera wet. Water entering the inside of the camera may cause malfunctions which in some cases may not be repairable.

- If you rotate the lens portion back when your camera is connected to other devices with the USB cable, the recorded images may be lost.
- Do not aim the camera at the sun or other bright light. This may cause irrecoverable damage to your eyes. Or it may cause the malfunction of your camera.
- Do not use the camera near a location that generates strong radio waves or emits radiation. The camera may not be able to record or play back properly.
- Using the camera in sandy or dusty locations may cause malfunctions.
- If moisture condensation occurs, turn off the camera and leave it for about an hour before using it.
- Do not shake or strike the camera. In addition to malfunctions and an inability to record images, this may render the recording medium unusable, or cause image data breakdown, damage or loss.
- When inserting or ejecting the “Memory Stick PRO Duo” media, be careful so that the “Memory Stick PRO Duo” media does not pop out and drop.
- When connecting your camera to another device with a cable, be sure to insert the connector plug in the correct way. Pushing the plug forcibly into the terminal will damage the terminal and may result in a malfunction of your camera.
- Playback of movies other than those shot, edited or composed on this camera is not guaranteed.

Notes on the LCD screen and the lens

- The LCD screen is manufactured using extremely high-precision technology, so over 99.99% of the pixels are operational for effective use. However, there may be some tiny black points and/or bright points (white, red, blue or green in color) that constantly appear on the LCD screen. These points are normal in the manufacturing process and do not affect the recording in any way.



- Exposing the LCD screen or the lens to direct sunlight for long periods may cause malfunctions. Be careful when placing the camera near a window or outdoors.
- Images may trail across on the LCD screen in a cold location. This is not a malfunction.

Note on disposal/transfer

- When using software embedded in the camera, personal information such as IDs and mail addresses may be saved on the internal memory of the camera. When transferring the camera to others or on disposal, do so after deleting the information input.

On image data compatibility

- This camera supports “MP4 format” as movie file format. Therefore, movies recorded by this camera cannot be played on devices that do not support “MP4 format”.
- This camera does not support “AVCHD format” and therefore is not compatible with the playback and recording of movies in “AVCHD format” like a Digital HD Video camera recorder.
- Still images recorded by this camera are compressed/recorded in JPEG[*1] format. The file extension is “.JPG”.
- This camera conforms with DCF[*2] universal standard established by JEITA[*3].
- Playback of still images/movies recorded with your camera on other equipment and playback of still images recorded or edited with other equipment on your camera are not guaranteed.

[*1] Joint Photographic Experts Group

[*2] Design rule for Camera File system

[*3] Japan Electronics and Information Technology Industries Association

Warning on copyright

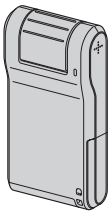
- Television programs, films, videotapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provisions of the copyright laws.

About this Handbook

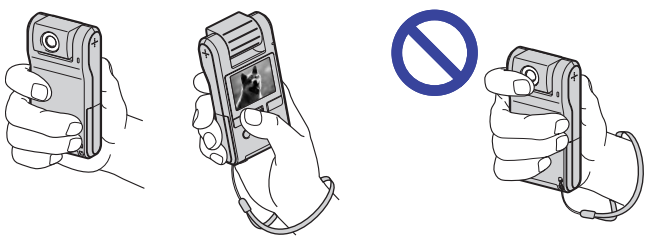
- The photographs used as examples of pictures in this Handbook are reproduced images, and are not actual images shot using this camera.
- Design and specifications of recording media and other accessories are subject to change without notice.

How to handle the camera

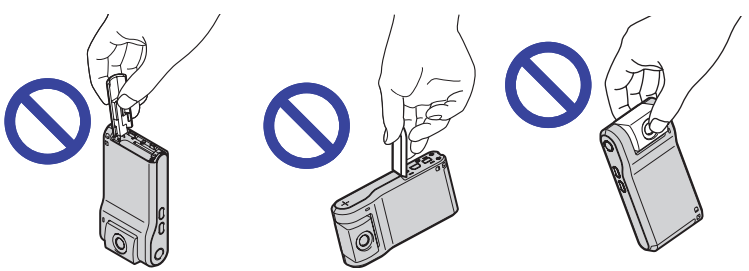
• When carrying the camera, rotate the lens portion back as illustrated.



• Be careful not to block the lens with your finger when shooting.



• Do not hold the camera by only holding the battery/“Memory Stick Duo” media cover, jack cover or lens.



• See page 15 for how to attach the wrist strap.

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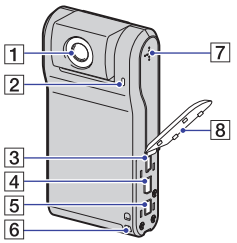
Identifying parts

See the pages in parentheses for details of operation.



1 Lens

2 Microphone

3 (USB) jack (55)
- Used when connecting to a computer with a USB cable.

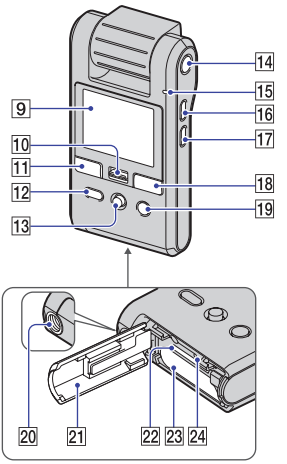
4 A/V OUT jack (58)
- Used when connecting to a TV, etc. with an A/V connecting cable.

5 DC IN jack
- Used when connecting with the AC adaptor to operate the camera by AC power.

6 Hook for wrist strap (15)

7 Speaker

8 Jack cover



9 LCD screen (28)

10 Zoom lever
For shooting: Zoom (W/T) (30)
For viewing: Playback zoom/ (Index) (32)

11 PHOTO button (26)

12 (Play) button (26, 31, 35)

13 Multi-selector
Menu on: ▲/▼/◀/▶ (37)
Menu off: DISP/ (28, 30)

14 ON/OFF (Power) button (20)

15 Power lamp

16 MENU button (37)

17 / (Image Size/Delete) button (22, 33)

18 MOVIE button (26)

19 (Sharemark) button (35)

20 Tripod receptacle (bottom)
- Use a tripod with a screw length of less than 5.5 mm (7/32 inches). You will be unable to firmly secure the camera to tripods having screws longer than 5.5 mm (7/32 inches), and may damage the camera.

21 Battery/“Memory Stick Duo” media cover (18)

22 “Memory Stick Duo” media slot

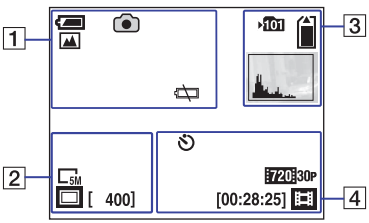
23 Battery slot

24 Access lamp (19)

Indicators on the screen

Each time you tilt the multi-selector to ▲ (DISP), the display changes (page 28). See the pages in parentheses for details of operation.

In shooting standby



When recording movies

1

Display	Indication
	Battery remaining (17)
	Shooting mode (26) • When switching to the shooting mode, appears for approximately two seconds.
W T ×1.3	Zoom scaling (30)
	Shooting mode (Scene Selection) (39)
	Low battery warning (66)

2

Display	Indication
5M 3:2 3M 2M VGA	Image size (23)
	Still image shooting mode (26)
[400]	Remaining number of recordable images (24)
	Menu/Guide menu (37) • Pressing MENU switches the menu/guide menu on/off.

3

Display	Indication
101	Recording folder (50) • This does not appear when using internal memory.
	Recording Media
	Histogram (28)

4

Display	Indication
	Self-timer (30)
1080 30P 720 30P VGA 30P	Image size (23)
[00:28:25]	Remaining recordable time (24)
2000	Shutter speed
F3.6	Aperture value
	Movie shooting mode (26)

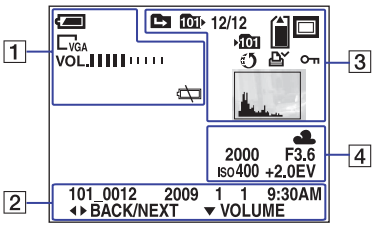
5

Display	Indication
	Movie recording
00:00:05	Recording time (24)

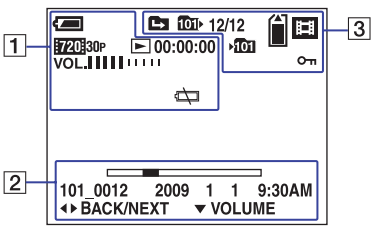
Note

• Indicators and their positions are approximate and differ from what you actually see.

When playing back still images



When playing back movies



1

Display	Indication
	Battery remaining (17)
5M 3:2 3M 2M VGA 1080 30P 720 30P VGA 30P	Image size (23)
/ / /	Playback/Stop/Slide Show fast forward (31, 43) Fast forward/ Rewind
00:00:00	Counter
VOL.	Volume (31)
×1.3	Zoom scaling (32)
	Low battery warning (66)

2

Display	Indication
	Playback bar
101_0012	Folder-file number (50)
2009 1 1 9:30 AM	Recorded date/time of the playback image
BACK/ NEXT	Select images
VOLUME	Adjust volume
	Menu/Guide menu (37)

3

Display	Indication
	Change folder (40) • This does not appear when using internal memory.
	Playback folder (40) • This does not appear when using internal memory.
12/12	Image number/Number of images recorded in selected folder
	Playback Media
	Shooting mode
	Recording folders (50)
	Sharemark (35)
	Print order (DPOF) mark (42)
	Protect (40)
	Histogram (28) • ⊗ appears when histogram display is disabled.

4

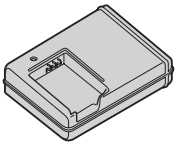
Display	Indication
AWB	White balance
2000	Shutter speed
F3.6	Aperture value
ISO400	ISO number
+2.0EV	Exposure Value

Note

• Indicators and their positions are approximate and differ from what you actually see.

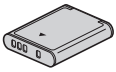
Checking the accessories supplied

- Battery charger BC-CSK/BC-CSKA (1)

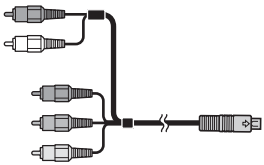


- Power cord (mains lead) (1)
  (not supplied in the USA and Canada)

- Rechargeable battery pack NP-BK1 (1)

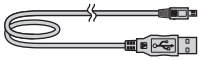


- Component A/V cable (1)

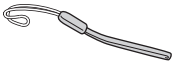


- A/V connecting cable (1)

- USB cable (1)

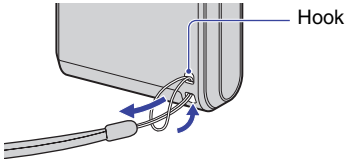


- Wrist strap (1)



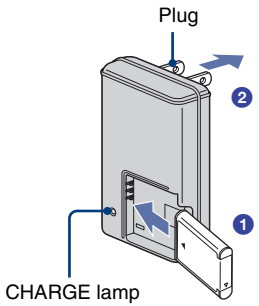
- CD-ROM (1)
  - PMB (Picture Motion Browser) including PMB Guide
  - Mobile HD Snap Camera Handbook (PDF)
- Instruction Manual (1)

Attach the strap and place your hand through the loop to prevent the camera from damage by being dropped, etc.

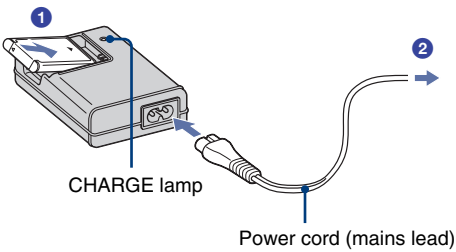


1 Preparing the battery pack

For customers in the USA and Canada



For customers other than those in the USA and Canada



1 Insert the battery pack into the battery charger.

- Insert the battery pack as far as it will go, then press the back of the battery pack gently until it clicks.

2 Connect the battery charger to the wall outlet (wall socket).

The CHARGE lamp lights up, and charging starts.

When the CHARGE lamp turns off, charging is finished (Normal charge). Also, the CHARGE lamp may turn off when the temperature is outside of the recommended operating temperature (10 to 30°C), as the charger is on standby.

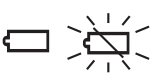
Charging time

Full charge time
Approx. 300 min.

- Time required to charge a fully depleted battery at a temperature of 25°C (77°F). Charging may take longer under certain circumstances or conditions.
- See page 24 for the number of images that can be recorded.
- Connect the battery charger to an easily accessible wall outlet (wall socket) close by.
- Even if the CHARGE lamp is not lit, the battery charger is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet (wall socket). If some trouble occurs while using the battery charger, immediately shut off the power by disconnecting the plug from the wall outlet (wall socket).
- When charging is finished, disconnect the power cord (mains lead) from the wall outlet (wall socket).

To check the remaining battery time

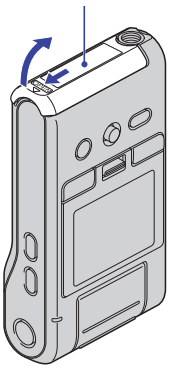
Rotate the lens portion or press ON/OFF button to turn on and check the remaining battery on the LCD screen.

Battery remaining indicator					
Battery remaining guidelines	Sufficient power remaining	Battery almost fully charged	Battery half full	Battery low, recording/ playback will stop soon.	Charge the battery. (The warning indicator flashes.)

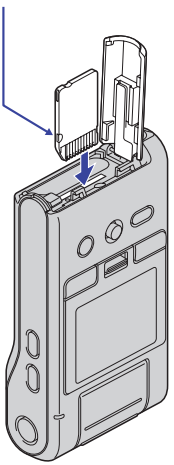
- It takes about one minute until the correct battery remaining indicator appears.
- The displayed battery remaining indicator may not be correct under certain circumstances.
- The Clock Set screen appears when the camera is turned on for the first time (page 20).

2 Inserting the battery pack/“Memory Stick PRO Duo” media (sold separately)

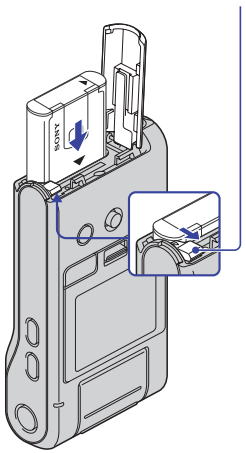
❶ Battery/“Memory Stick Duo” media cover



❷ With the terminal side facing the LCD screen, insert the “Memory Stick Duo” media until it clicks into place.



❸ Align the ▲ mark of the battery slot with the ▲ mark on the battery pack. Press and hold the battery eject lever and insert the battery pack.



1 Open the battery/“Memory Stick Duo” media cover.

2 Insert the “Memory Stick PRO Duo” media (sold separately) all the way in until it clicks.

3 Close the battery/“Memory Stick Duo” media cover.

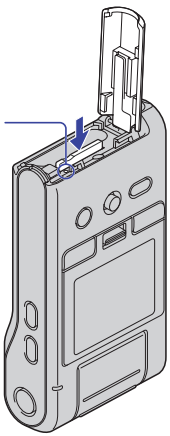
When there is no “Memory Stick PRO Duo” media inserted

The camera records/plays back images using the internal memory (approx. 12 MB).

To remove “Memory Stick PRO Duo” media

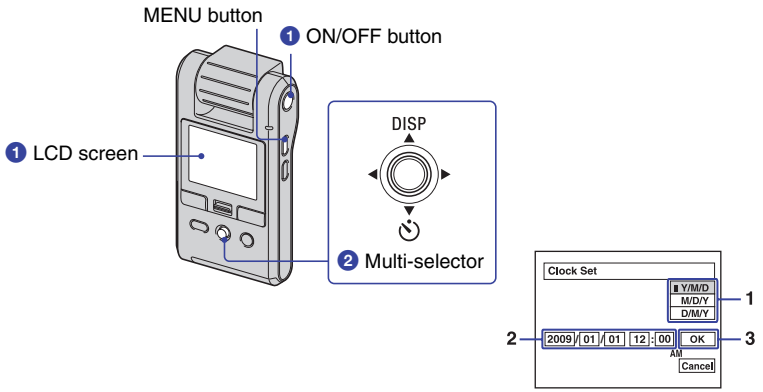
Open the battery/“Memory Stick Duo” media cover.

Make sure that **the access lamp** is not lit, then push the “Memory Stick PRO Duo” media in once.



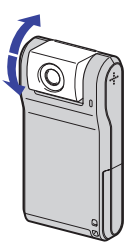
- Never remove “Memory Stick PRO Duo” media when the access lamp is lit. This may cause damage to data in the “Memory Stick PRO Duo” media.

3 Turning the camera on/setting the clock



1 Rotate the lens portion.

- Rotating the lens portion in the arrow direction turns on the camera. To turn off the power, rotate it back.



- You can also turn the power on by pressing ON/OFF button.
- The lens rotates within the range of 0 to 270 degrees.

2 Set the clock with the multi-selector.

1 Select the date display format with ▲/▼, then press the multi-selector.
2 Select each item with ◀/▶ and set the numeric value with ▲/▼.
3 Select [OK] with ▶, then press the multi-selector.

To turn the power off

Press ON/OFF button.

- You can also turn the power off by rotating the lens portion back.

To change the date and time

Press MENU and select [Clock Set] in (Setup 2) (page 57).

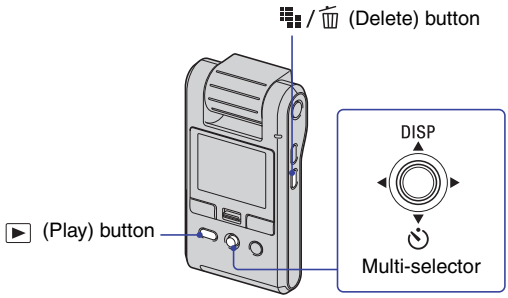
When you turn on the power

If the camera is running on battery power and you do not operate the camera for about five minutes, the camera turns off automatically to prevent wearing down the battery (Auto power-off function).

Changing the language settings

You can change the on-screen displays to show messages in a specified language. To select the screen language, press MENU and select [Language] in (Setup 1) (page 53).

Selecting the image size according to use



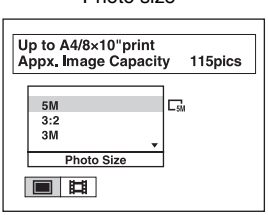
1 Make sure that the camera is set to shooting mode.

- If the camera is set to playback mode, press (Play) button to switch to shooting mode. appears for approximately two seconds.

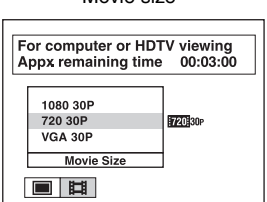
2 Press / (Image Size) button.

3 Select (Photo Size) or (Movie Size) with the multi-selector tilt to ◄/►, then select the desired image size with ▲/▼.

Photo size



Movie size



- Recommended use and number of remaining shots are displayed on the upper part of the LCD screen.

4 Press / (Image Size) to complete the setting.

The default settings are marked with ✓.

	Image size	Guidelines
✓	5M (2592×1944)	For prints up to A4 (8×10")
	3:2* (2592×1728)	Shoot in 3:2 aspect ratio
	3M (2048×1536)	For prints up to 10×15 cm (4×6") or 13×18 cm (5×7")
	2M (1632×1224)	For prints up to 10×15 cm (4×6")
	VGA (640×480)	Shoot at a small image size for e-mail attachment

* Images are recorded in 3:2 aspect ratio, same as photograph printing paper or postcards, etc.

	Movie image size	Usage guidelines
	1080 30P[*1][*2][*3]	Shoot HD (high definition) quality movies in sizes suited for display on computer or high definition TV
✓	720 30P	Shoot HD (high definition) quality movies in sizes suited for display on computer
	VGA 30P[*2]	Shoot SD (standard definition) quality movies in sizes suited for uploading on websites

[*1] Shoot the subject in a bright place because the image is recorded darkened.

[*2] The range you can shoot is narrowed.

[*3] The anti-blur function does not work.

- The movies shot with this camera will be recorded in MPEG-4 AVC/H.264 Main Profile, approximately 30 frames per second, Progressive, AAC LC, “MP4 format”.
  - MPEG: Movie Picture Experts Group
  - AVC: Advanced Video Codec
- The larger the image size, the higher the image quality.

Number of still images and recording time of movies

The number of still images and the length of time for movies may vary depending on the shooting conditions.

The approximate number of still images

(Units: Images)

Capacity / Size/ Quality	Internal memory	"Memory Stick PRO Duo" media formatted with this camera							
	Approx. 12 MB	128 MB	256 MB	512 MB	1 GB	2 GB	4 GB	8 GB	16 GB
5M	3	50	95	190	390	770	1550	3100	6200
3:2	4	70	135	270	550	1100	2200	4400	8800
3M	9	80	155	305	620	1250	2500	5000	10000
2M	15	130	235	480	980	2000	4000	8000	16000
VGA	75	780	1500	2950	6000	12000	23500	48000	96000

- When the number of remaining shootable images is greater than 9,999, the ">9999" indicator appears.
- When images recorded using earlier Sony models are played back on this camera, the display may differ from the actual image size.
- All numbers measured when using "Memory Stick PRO Duo" media made by Sony Corporation. The number of still images and the length of time for movies may vary depending on the shooting conditions and the recording media.
- When measuring media capacity, 1 GB equals 1 billion bytes, a portion of which is used for data management.

The approximate recording time of movies

The table below shows the approximate maximum recording times. These are the total times for all movie files. Continuous shooting is possible for approximately 25 minutes.

(Units: hour : minute : second)

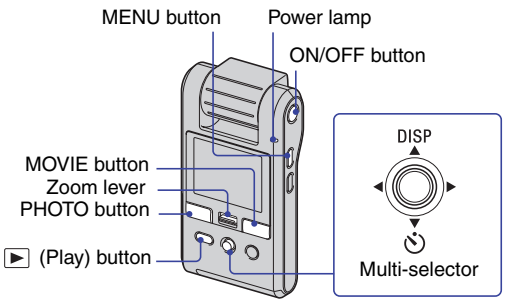
Capacity / Size	Internal memory	"Memory Stick PRO Duo" media formatted with this camera					
	Approx. 12 MB	512 MB	1 GB	2 GB	4 GB	8 GB	16 GB
1080 30P	0:00:15 (0:00:05)	0:10:00 (0:05:00)	0:20:00 (0:10:00)	0:40:00 (0:20:00)	1:20:00 (0:40:00)	2:50:00 (1:30:00)	5:40:00 (3:10:00)
720 30P	0:00:20 (0:00:10)	0:15:00 (0:07:00)	0:30:00 (0:15:00)	1:00:00 (0:30:00)	2:05:00 (1:05:00)	4:10:00 (2:10:00)	8:30:00 (4:25:00)
VGA 30P	0:00:45 (0:00:25)	0:30:00 (0:20:00)	1:00:00 (0:40:00)	2:00:00 (1:20:00)	4:00:00 (2:40:00)	8:10:00 (5:30:00)	16:30:00 (11:10:00)

- The number in ( ) is the minimum recording time.
- All numbers are measured when using "Memory Stick PRO Duo" media made by Sony Corporation. The recordable time for movies varies depending on the recording conditions, subject conditions, and the type of "Memory Stick" media.

• Before the continuous shooting ends, the recording time indicator flashes, and after a while, the recording will automatically stop.

Your camera uses the VBR (Variable Bit Rate) format to automatically adjust image quality to suit the recording scene. This technology causes fluctuations in the recording time of the "Memory Stick PRO Duo" media.
Movies containing quickly moving and complex images are recorded at a higher bit rate, and this reduces the overall recording time.

Shooting images



1 Rotate the lens portion to turn the power on.

- You can also turn the power on by pressing ON/OFF.

2 Confirm the composition.

Position the subject in the center of the screen.

3 Start shooting.

When shooting still images:

Press PHOTO.

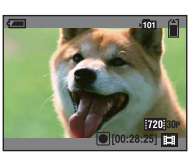
In standby

In pressing PHOTO (4:3)

- You can only check the angle of view by pressing PHOTO half-way. To shoot still images, press PHOTO fully.
- The angle of view switches to the aspect ratio (4:3 or 3:2) according to the shooting size of the still image.
- Black bands appear on the top and bottom of the image in the following situations:
  - –When the image size is either [1080 30P] or [720 30P].
  - –When the aspect ratio is 3:2.
- You cannot shoot still images while shooting movies.
- When shooting still images, the angle of view will change from that in shooting standby.

When shooting movies:

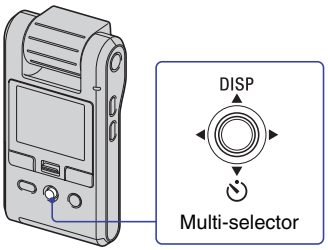
Press MOVIE.
To stop recording, press MOVIE again.



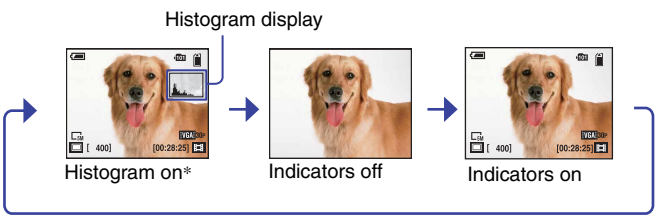
- Black bands appear on the top and bottom of the image when the image size is either [1080 30P] or [720 30P].

- Continuous shooting is possible for approximately 25 minutes.
- When shooting movies, the anti-blur function will be set on.

Changing the screen display



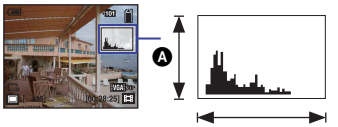
Each time you tilt the multi-selector to ▲ (DISP), the display changes as follows.



* During playback, the image information is displayed.

- By tilting to ▲ (DISP) longer, you can increase the brightness of the LCD backlight. Tilt to ▲ (DISP) longer again to return the brightness of the LCD backlight to normal.
- If you view images in bright outside light, adjust the brightness of the LCD backlight up. However, the battery power may decrease faster under such condition.
- The LCD screen will not display while the camera is connected to a TV.
- The histogram does not appear in the following situations:
  While shooting
  – When the menu is displayed.
  – When recording movies
  During playback
  – When the menu is displayed.
  – In index mode
  – When you are using playback zoom.
  – When you are rotating still images.
  – During playback of movies
- A large difference in the histogram displayed when shooting and during playback may occur when the shutter speed is slow or fast.
- The histogram may not appear for images recorded using other cameras.

About the histogram



A Number of pixels B Brightness

A histogram is a graph showing the brightness of an image. Tilt to ▲ (DISP) repeatedly to display the histogram inside the screen. The graph display indicates a bright image when skewed to the right side, and a dark image when skewed to the left side.

Useful functions for shooting

W/T Using the zoom

Slide the zoom lever toward T to zoom in, slide the zoom lever toward W to zoom out.

- This camera is only capable of digital zoom.
- When using the zoom, the image may not zoom in or zoom out smoothly.

Using the self-timer

Tilt the multi-selector to ▼ (⏲).

(No indicator): Not using the self-timer
⏲ : Using the self-timer

If you press PHOTO, countdown timer is displayed, and after rapid beep sounds are heard, the camera will shoot.

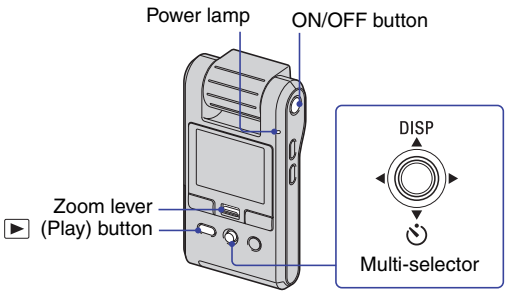
To cancel, tilt to ▼ (⏲) again.

Recording in mirror mode

Rotate the lens portion to the same direction the LCD screen is facing.

- A mirror-image of the subject appears on the LCD screen, but the image will be normal when recorded.
- The same image as those recorded appears on the LCD screen instead of the mirror-image in playback mode.
- The image may become distorted when you rotate the lens portion from the front to the same direction the LCD screen is facing, or in the opposite way.

Viewing images



1 Rotate the lens portion to turn the power on.

- You can also turn the power on by pressing ON/OFF.

2 Press (Play) button to set the camera to playback mode.

- Index screen appears.

3 Select the image you want to playback with the multi-selector tilt to ▲/▼/◀/▶.

Still image:

Press the multi-selector.

- A still image is displayed.

Movie:

Press the multi-selector to pause and playback a movie.

Tilt to ▶ to fast forward, ◀ to rewind. (Press the multi-selector to return to normal playback.)

Tilt to ▼ to display the volume control screen, then adjust the volume with ◀/▶.

- When shooting movies of fast moving subjects, such as a sport scene, the movie may not be played back smoothly.
- When the playback of the first movie ends, the playback of the next movie automatically starts. When the playback of the last movie ends, playback of movies will end.

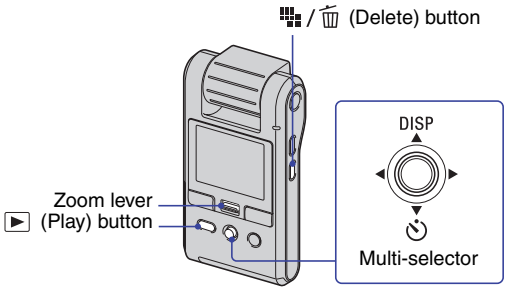
To view an enlarged image (playback zoom)

Slide the zoom lever toward T while displaying a still image.
To undo the zoom, slide the zoom lever toward W.
Adjust the position: ▲/▼/◀/▶
Cancel playback zoom: Press the multi-selector.

To return to the index screen

Slide the zoom lever toward (Index) while displaying a still image or pausing the playback of a movie.

Deleting images



1 Press (Play) button to set the camera to playback mode.

- Index screen appears.

2 Press / (Delete) and select [Select] with the multi-selector tilt to ▲/▼, then press the multi-selector.

3 Select the images you want to delete with ▲/▼/◀/▶, then press the multi-selector to display the (Delete) indicator on the selected image.

4 Press / (Delete).

5 Select [OK] with ▶, then press the multi-selector.

- To delete all the images in the folder, select [All In This Folder] with ▲/▼ in step 2 instead of [Select], then press the multi-selector.

To cancel a selection

Select the image you have previously selected for deletion, then press the multi-selector to delete the indicator from the image.

To delete images while a single image is displayed

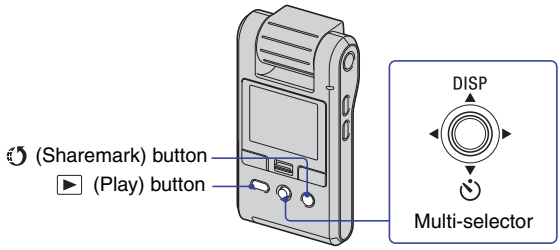
① Press / (Delete).

② Select [Delete] with ▲, then press the multi-selector.

To cancel the deletion

Select [Exit] with ▼, then press the multi-selector.

Select images to upload on a website (Sharemark)

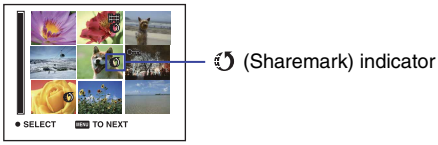


1 Press (Play) button to set the camera to playback mode.

- Index screen appears.

2 Press (Sharemark) button and select [Select] with the multi-selector tilt to ▲/▼, then press the multi-selector.

3 Select the images you want to upload on a website with ▲/▼/◄/►, then press the multi-selector to display indicator on the selected image.



4 Press (Sharemark).

5 Select [OK] with ►, then press the multi-selector.

The (Sharemark) indicator turns white.

- To select all the images in the folder, select [All In This Folder] with ▲/▼ in step 2 instead of [Select], then press the multi-selector.
- The file size of movies shot at HD (high definition) is large and therefore it may take time to upload. Movies shot at [VGA 30P] is recommended for uploading on websites.

To cancel a selection

Select the image you have previously selected for uploading, then press the multi-selector to delete the indicator from the image.

To select images to upload on a website while a single image is displayed

① Display the image you want to upload on a website.

② Press (Sharemark) button.
The indicator is marked to the image.

To exit the function

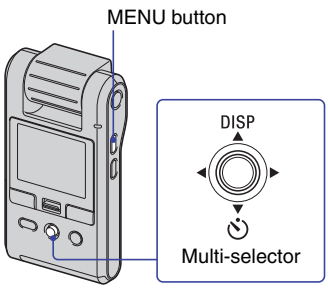
Select [Exit] with ▼, then press the multi-selector.

Removing Sharemarks

To remove the Sharemark from an image,select the image to remove the Sharemark and take the same steps as when marking a Sharemark on an image.

- By using the software “PMB Portable” embedded in the camera, you can easily upload images marked with Sharemarks. For details, see Help in the “PMB Portable”.
- When connecting to the network service, the page will be redirected by the server of Sony to the URL entered in the network service setting.
- When uploading images via Internet, including this product, note that depending on the Internet service provider, the cache may remain within the computer used.

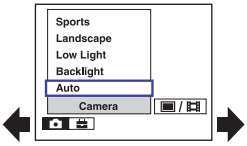
Using the menu items



1 Press MENU to display the menu.

- The menu will be displayed only during shooting and playback mode.
- Different items will become visible depending on the selected mode.

2 Select the desired menu item with the multi-selector tilt to ◄/►.



- In shooting mode, ■/🎞 is indicated. You cannot set an item with the ■/🎞 indicator in gray.
- In playback mode, press the multi-selector after setting an item.

3 Select a setting with ▲/▼.

4 Press MENU to turn off the menu.

Menu items

The available menu items vary depending on the operating conditions.
The shooting menu is available only in the shooting mode, and the viewing menu is available only in the playback mode.
Only the available items are displayed on the screen.

Menu for shooting (page 39)

Camera	Setup

Menu for viewing (page 40)

(Folder)	(Protect)
DPOF	(Slide)
(Rotate)	(Divide)
(Setup)	

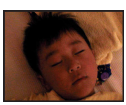
Shooting menu

The function in shooting mode using MENU button are described below. For details on how to operate the menu, see page 37.

The default settings are marked with ✓.
When the mode has been set to playback, switch it to REC with ▶ (Play) button.

Camera: Selecting a shooting mode

The following modes are predetermined to match the scene conditions.

	Scene Selection	
	Backlight Shoots strongly backlight scenes.	 Low Light*1*2 Suitable for shooting in dark places.
	Landscape Focuses on a distant subject.	Sports Shoots moving subjects outdoors or in other bright places.
✓	Auto	You can shoot images in Auto adjustment mode.

*1 The shutter speed becomes slower, so using a tripod is recommended.
*2 The image may appear rough depending on the subject.
- The Flicker Cancel function does not work when (Low Light) mode or (Sports) mode is selected in the Scene Selection mode.

Setup: Selecting the shooting settings

Select the settings for the shooting function. See page 48.

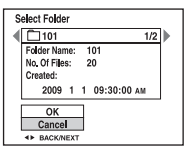
Viewing menu

The default settings are marked with ✓.
When the mode has been set to REC, switch it to playback with ▶ (Play) button.

(Folder): Selecting the folder for viewing images

Selects the folder containing the image you want to playback when using the camera with "Memory Stick PRO Duo" media.

① Select the desired folder with the multi-selector tilt to ◀/▶.



② Select [OK] with ▲, then press the multi-selector.

To cancel selecting the folder selection

Select [Cancel] in step ②, then press the multi-selector.

On the folder

The camera stores images in a specified folder of "Memory Stick PRO Duo" media. You can change the folder or create a new one.

- To create a new folder → [Create REC. Folder] (page 50)
- To change the folder for recording images → [Change REC. Folder] (page 51)
- When multiple folders are created in the "Memory Stick PRO Duo" media and the first or last image in the folder is displayed, the following indicators appear.

: Moves to the previous folder
: Moves to the next folder
: Moves to either the previous or next folders

(Protect): Preventing accidental erasure

Protects images against accidental erasure.

✓	(Protect)	See the following procedure.
	Exit	Exits the Protection function.

To protect images in index mode

① Press ▶ (Play) button to set the camera to playback mode.
② Press MENU to display the menu.
③ Select (Protect) with the multi-selector tilt to ◀/▶, then press the multi-selector.
④ Select [Select] with ▲/▼, then press the multi-selector.

⑤ Select the image you want to protect with ▲/▼/◀/▶, then press the multi-selector.
An orange indicator appears on the selected image.

⑥ Repeat step ⑤ to protect other images.

⑦ Press MENU.

⑧ Select [OK] with ▶, then press the multi-selector.
The indicator turns white. The selected images are protected.

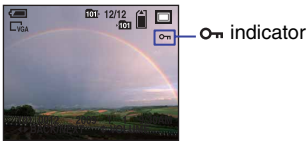
- To protect all images in the folder, select [All In This Folder] in step ④, then press the multi-selector. Select [On] with ▶, then press the multi-selector.

To protect images in single-image mode

① Display the image you want to protect.

② Press MENU to display the menu.

③ Select (Protect) with ◀/▶, then press the multi-selector.
The image is protected and the indicator appears on the image.



④ To protect other images, select the desired image with ◀/▶, then press the multi-selector.

To cancel the protection

In index mode

① Select the image for which you want to remove protection in step ⑤ of “To protect images in index mode”.

② Press the multi-selector to turn the indicator gray.

③ Repeat the operation above for all images to be unprotected.

④ Press MENU, select [OK] with ▶, then press the multi-selector.

In single-image mode

Press the multi-selector in step ③ or ④ of “To protect images in single-image mode”.

To cancel protection of all images in the folder

Select [All In This Folder] in step ④ of "To protect images in index mode", then press the multi-selector. Select [Off] with ▶, then press the multi-selector.

- Note that formatting the "Memory Stick PRO Duo" media erases all data stored on the recording media, even if images are protected, and these images cannot be recovered.
- It may take some time to protect an image.

DPOF: Adding a Print order mark

Adds (Print order) mark to images you want to print. By using the "Memory Stick PRO Duo" media, images with DPOF marks can be printed at photo shops or with printers which supports the DPOF standard.

- You cannot mark movies.

Marking in index mode

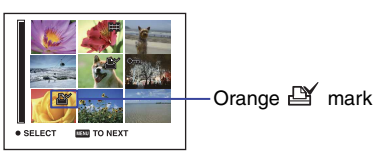
① Press (Play) button to set the camera to playback mode.

② Press MENU to display the menu.

③ Select [DPOF] with the multi-selector tilt to ◀/▶, then press the multi-selector.

④ Select [Select] with ▲/▼, then press the multi-selector.

⑤ Select the image you want to mark with ▲/▼/◀/▶, then press the multi-selector.
An orange mark appears on the selected image.



⑥ Repeat step ⑤ to mark other images.

⑦ Press MENU.

⑧ Select [OK] with ▶, then press the multi-selector.
The mark turns white.

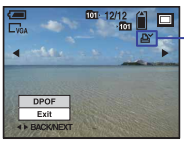
To cancel, select [Cancel] in step ④ or select [Exit] in step ⑧, then press the multi-selector.

Marking in single-image mode

① Display the image you want to print.

② Press MENU to display the menu.

③ Select [DPOF] with ◀/▶, then press the multi-selector.
The (Print order) mark is added to the image.



④ To mark other images, display the desired image with ◀/▶, then press the multi-selector.

To remove the mark

To remove the mark from an image, select the image to remove the mark and take the same steps as when marking a mark on an image.
The indicator disappears.

To remove all the marks in the folder

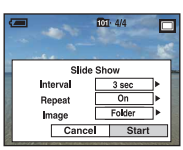
Select [All In This Folder] in step ④ of "Marking in index mode", then press the multi-selector. Select [Off], then press the multi-selector.

(Slide): Playing back a series of images

① Select the images you want to start slide show with the multi-selector tilt to ▲/▼/◀/▶, then press the multi-selector.

② Press MENU to display the menu.

③ Select (Slide Show) with the multi-selector tilt to ◀/▶, then press the multi-selector.



④ Select [Start] with ◀/▶, then press the multi-selector to start playback.

To pause the slide show

Press the multi-selector.
To restart, select [Continue] with ▲/▼, then press the multi-selector.

To display the previous/next image

Tilt to ◀/▶ while the slide show is paused.

To end the slide show

Select [Exit] with ▲/▼ while the slide show is paused, then press the multi-selector.

To change the setup

The default settings are marked with ✓.

Interval		
✓	3 sec	Sets the slide show interval.
	5 sec	
	10 sec	
	30 sec	
	1 min	

Repeat		
✓	On	Plays back images in a continuous loop.
	Off	After all the images have been played back, the slide show ends.

Image When you use “Memory Stick PRO Duo” media (sold separately)		
✓	Folder	Plays back all the images in the selected folder.
	All	Plays back all the images in “Memory Stick PRO Duo” media in order.

(Rotate): Rotating a still image

Rotates a still image.

① Press (Play) button to set the camera to playback mode.

② Select the still image to rotate with the multi-selector tilt to ▲/▼/◀/▶, then press the multi-selector.

③ Press MENU to display the menu.

④ Select [Rotate] with ◀/▶, then press the multi-selector.

⑤ Select [↶ ↷], then rotate the image with ◀/▶.

⑥ Select [OK] with ▲/▼, then press the multi-selector.

- You cannot rotate protected images or movies.
- You may not be able to rotate images shot with other cameras.

• When viewing images on a computer, the image rotation information may not be reflected depending on the software.

(Divide): Cutting movies

Flow of the movie ➡

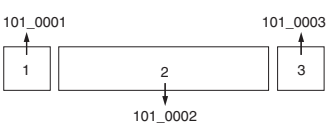
Cuts movies, or deletes unnecessary scenes of movies. This is a recommended function to use when the internal memory or "Memory Stick PRO Duo" media capacity is insufficient, or when you attach movies to your e-mail messages.

• Note that the original movie is deleted and that number is skipped. Also note that you cannot restore files once you cut them.

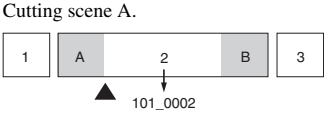
OK	See the following procedure.
Cancel	Cancels division.

Example: Cutting a movie numbered 101_0002

This section describes an example of dividing a movie numbered 101_0002 and deleting it in the following file configuration.



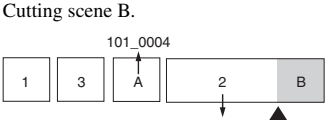
1 Cutting scene A.



Divide

101_0002 is divided into 101_0004 and 101_0005.

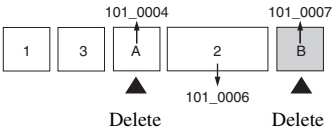
2 Cutting scene B.



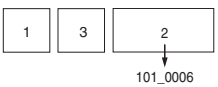
Divide

101_0005 is divided into 101_0006 and 101_0007.

3 Deleting scenes A and B if they are unnecessary.



4 Only the desired scenes remain.



Procedure

① Press ▶ (Play) button to set the camera to playback mode.

② Select the movie to divide with the multi-selector tilt to ▲/▼/◀/▶, then press the multi-selector. The playback of the movie starts.

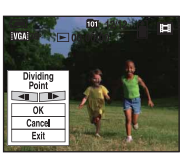
③ Press the multi-selector to stop playback.

④ Press MENU to display the menu.

⑤ Select [Divide] with ◀/▶, then press the multi-selector.

⑥ Select [OK] with ▲, then press the multi-selector.
The playback of the movie starts.

⑦ Press the multi-selector.



- When you want to adjust the cutting point, select ◀II/II▶ with ◀/▶ (frame rewind/forward).
- If you want to change the cutting point, select [Cancel] and press the multi-selector. The playback of the movie starts again.

⑧ Select [OK] with ▲, then press the multi-selector.
The confirmation screen appears.

⑨ Select [OK] with ▲, then press the multi-selector.
The movie is cut.

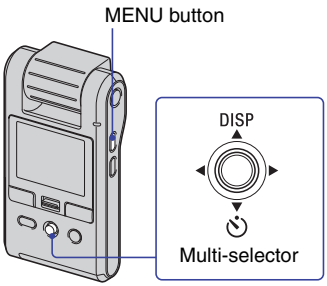
- The cut movies are assigned new numbers, then recorded as the newest files in the selected recording folder.
- You cannot cut the following kinds of images.
  - Still images
  - Movies not long enough to cut (shorter than about two seconds)
  - Protected movies (page 40)
- You cannot cut the movies when the capacity of recording media is insufficient.

(Setup): Changing Setup items

See page 48.

Using Setup items

You can change the default settings using the Setup screen.

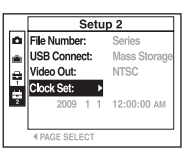


1 Press MENU to display the menu.

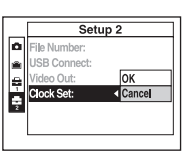
2 Tilt the multi-selector to ► to select (Setup).

3 Tilt to ▲/▼/◄/► to select the item you want to set.

The frame of the selected item turns orange.



4 Tilt to ► to enter the setting.



To turn off the Setup screen, press MENU.
To return to the menu from the Setup screen, tilt to ◄ repeatedly.

To cancel the setting change

Select [Cancel] if it appears, then press the multi-selector. If it does not appear, select the previous setting again.

• This setting is maintained even when the power is turned off.

For details on the operation ☞ page 48

The default settings are marked with ✓.

Function Guide

When you operate the camera, the description of functions is displayed.

✓	On	Displays the function guide.
	Off	Does not display the function guide.

Auto Review

Displays the recorded image on the screen for approximately two seconds immediately after shooting a still image.

✓	On	Use the Auto Review.
	Off	Does not use Auto Review.

Flicker Cancel

Curbs the flicker generated by fluorescent by using the electro-shutter.

	On	Use the Flicker Cancel.
✓	Off	Does not use the Flicker Cancel.

Memory Stick Tool

For details on the operation ☞ page 48

This item appears only when “Memory Stick PRO Duo” media is inserted in the camera.

Format

Formats the “Memory Stick PRO Duo” media. Commercially available “Memory Stick PRO Duo” media is already formatted, and can be used immediately.

- Note that formatting irrevocably erases all data on “Memory Stick PRO Duo” media, including even protected images.

① Select [Format] with the multi-selector tilt to ▲/▼/◀/▶, then tilt to ▶.

② Select [OK] with ▲, then press the multi-selector.
The message “All data in “Memory Stick” will be erased” appears.

③ Select [OK] with ▲, then press the multi-selector.
The format is completed.

To cancel the formatting

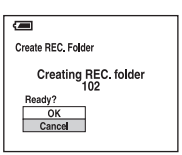
Select [Cancel] in step ③, then press the multi-selector.

Create REC. Folder

Creates a folder in “Memory Stick PRO Duo” media for recording images.

① Select [Create REC. Folder] with the multi-selector tilt to ▲/▼/◀/▶, then tilt to ▶.

② Select [OK] with ▲, then press the multi-selector.
The folder creation screen appears.



③ Select [OK] with ▲, then press the multi-selector.
A new folder is created with a number incremented one higher than the largest number, and the folder becomes the current recording folder.

To cancel the folder creation

Select [Cancel] in step ③, then press the multi-selector.

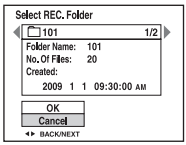
- When not creating a new folder, the “101ANV01” folder is selected as the movie folder, and “101MSDCF” folder is selected as the still image folder.
- You can create folders designated up to “999” for both still images and movies.
- Images are recorded in the newly created folder until a different folder is created or selected.
- You cannot delete a folder with the camera. To delete a folder, use your computer, etc.
- Up to 9,999 images can be stored in one folder. When the folder capacity is exceeded, a new folder is automatically created.

Change REC. Folder

Changes the folder currently used for recording images.

① Select [Change REC. Folder] with the multi-selector tilt to ▲/▼/◀/▶, then tilt to ▶.

② Select [OK] with ▲, then press the multi-selector.
The folder selection screen appears.



③ Select the desired folder with ◀/▶, and [OK] with ▲, then press the multi-selector.

To cancel changing the recording folder

Select [Cancel] in step ③, then press the multi-selector.

- You cannot select the “100” folder as a recording folder.
- You cannot move recorded images to a different folder.

Copy

Copies all images in the internal memory to “Memory Stick PRO Duo” media.

① Insert “Memory Stick PRO Duo” media.

② Select [Copy] with the multi-selector tilt to ▲/▼/◀/▶, then tilt to ▶.

③ Select [OK] with ▲, then press the multi-selector.
The message “All data in internal memory will be copied” appears.

④ Select [OK] with ▲, then press the multi-selector.
Copying starts.

To cancel the copying

Select [Cancel] in step ④, then press the multi-selector.

- Charge the battery sufficiently. Copying image files when the remaining battery amount is low can cause data transfer failure or damage the data due to battery exhaustion.
- You cannot copy individual images.
- The original images in the internal memory are retained even after copying. To delete the contents of the internal memory, remove the “Memory Stick PRO Duo” media after copying, then execute the [Format] command in [Internal Memory Tool] (page 52).
- When you copy the data in the internal memory to the “Memory Stick PRO Duo” media, a new folder is created. You cannot choose a specific folder on the “Memory Stick PRO Duo” media as the destination for the data to be copied.
- Even if you copy data, a (Sharemark) or a (Print order) mark is not copied.

Internal Memory Tool For details on the operation ☞ page 48

This item appears only when “Memory Stick PRO Duo” media is not inserted in the camera.

Format

Formats data stored in the internal memory.

- Note that formatting irrevocably erases all data in the internal memory, including even protected images.

① Select [Format] with the multi-selector tilt to ▲/▼/◀/▶, then tilt to ▶.

② Select [OK] with ▲, then press the multi-selector.
The message “All data in internal memory will be erased” appears.

③ Select [OK] with ▲, then press the multi-selector.
The format is completed.

To cancel the formatting

Select [Cancel] in step ③, then press the multi-selector.

The default settings are marked with ✓.

LCD Backlight

Selects the brightness of the LCD backlight.

	Bright	Brightens.
✓	Normal	

- When you connect your camera to the wall outlet (wall socket) using the supplied AC adaptor, [Bright] is automatically selected for the setting.
- You can change the setting by tilting the multi-selector to ▲ (DISP) longer.
- Selecting [Bright] uses up the battery charge faster.

Beep

Selects the sound produced when you operate the camera.

	Shutter	Turns on the shutter sound when you press PHOTO.
✓	On	Turns on the beep/shutter sound when you press the multi-selector, PHOTO or MOVIE button.
	Off	Turns off the beep/shutter sound.

Language

Selects the language to be used to display the menu items, warnings, and messages.

Initialize

Initializes the setting to the default setting. Even if you execute this function, the images stored in the internal memory are retained.

① Select [Initialize] with the multi-selector tilt to ▲/▼/◀/▶, then tilt to ▶.

② Select [OK] with ▲, then press the multi-selector.
The message “Initialize all settings” appears.

③ Select [OK] with ▲, then press the multi-selector.
The settings are reset to the default setting.

To cancel the resetting

Select [Cancel] in step ③, then press the multi-selector.

- Be sure not to turn the power of the camera off while initializing.

The default settings are marked with ✓.

File Number

Selects the method used to assign file numbers to images.

✓	Series	Assigns numbers to files in sequence even if the recording folder or the “Memory Stick PRO Duo” media is changed. (When the replaced “Memory Stick PRO Duo” media contains a file with a number higher than the last assigned number, a number one higher than the largest number is assigned.)
	Reset	Starts from 0001 each time the folder is changed. (When the recording folder contains a file, a number one higher than the largest number is assigned.)

USB Connect

Selects the USB mode to be used when connecting the camera to a computer using the USB cable.

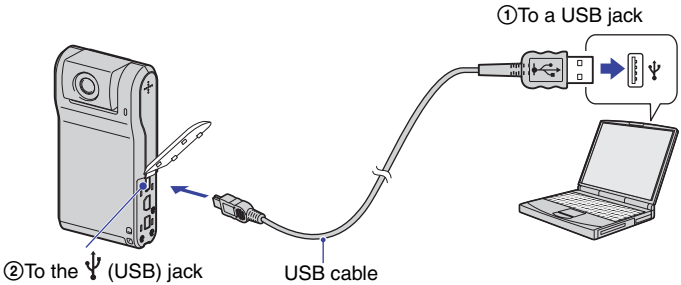
	Web camera	Connect the camera and a computer with a USB cable and use the camera as a webcam (USB streaming). • Movies output will be QVGA 30P Motion JPEG format. • Movies streamed will be also displayed on the LCD screen of the camera.
✓	Mass Storage	Establishes a Mass Storage connection between the camera and a computer or other USB device.

Connecting the camera and your computer with Mass Storage

“Mass Storage” mode lets a computer recognize the camera with “Memory Stick PRO Duo” media inserted as an external memory device and enables you to operate the camera through the computer connected with a USB cable.

Connecting the camera and your computer

Connect the camera as illustrated below.



- If you make a USB connection while shooting a movie, the shooting is stopped. The movie is saved up to the point it was stopped.

To delete the USB connection

Perform the procedures listed below beforehand when:

- Disconnecting the USB cable
- Removing “Memory Stick PRO Duo” media
- Inserting “Memory Stick PRO Duo” media into the camera after copying images from the internal memory
- Turning off the camera

① Double-click on the tasktray.

② Click (USB Mass Storage Device) → [Stop].

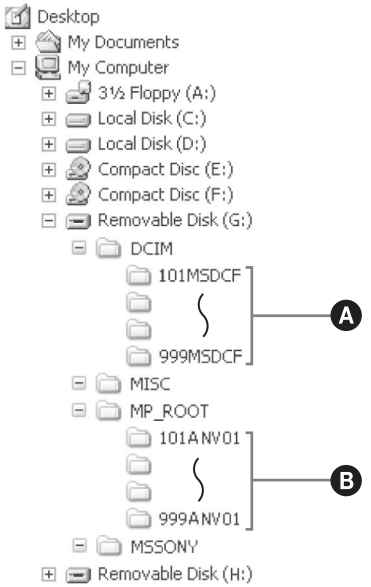
③ Confirm the device on the confirmation window, then click [OK].

④ Click [OK].
The device is disconnected.

- Step ④ is unnecessary for Windows XP.

Image file storage destinations and file names

Example: viewing folders on Windows XP



Ⓐ Folder containing image data recorded using your camera
When not creating any folder, there is only the “101MSDCF” folder

Ⓑ Folder containing movie data recorded using your camera
When not creating any folder, there is only the “101ANV01” folder

- The data in the internal memory are stored on the Removable Disk (H:) drive.*
- You cannot record/play back any images to the “MISC” folder.
- Image files are named as follows. □□□□ stands for any number within the range from 0001 to 9999.
  - Still image files: DSC0□□□□.JPG
  - Movie files: MAH0□□□□.MP4 (HD size), MAQ0□□□□.MP4 (VGA size)
- For more information about folders, see page 50.

* Drive names (such as (H:)) may vary depending on the computer.

Video Out

Sets the video signal output according to the TV color system of the connected video equipment. Different countries and regions use different TV color systems. If you want to view images on a TV screen, check page 59 for the TV color system of the country or region where the camera is used.

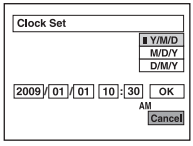
NTSC	Sets the video output signal to NTSC mode (e.g., for the USA, Japan).
PAL	Sets the video output signal to PAL mode (e.g., for Europe).

Clock Set

Sets the date and time.

① Select [Clock Set] with the multi-selector tilt to ▲/▼/◀/▶, then tilt to ▶.

② Select [OK] with ▲, then press the multi-selector.



③ Select the date display format with ▲/▼, then press the multi-selector.

④ Select each item with ◀/▶ and set the numeric value with ▲/▼.

⑤ Select [OK] with ▶, then press the multi-selector.

To cancel the clock setting

Select [Cancel] in step ⑤, then press the multi-selector.

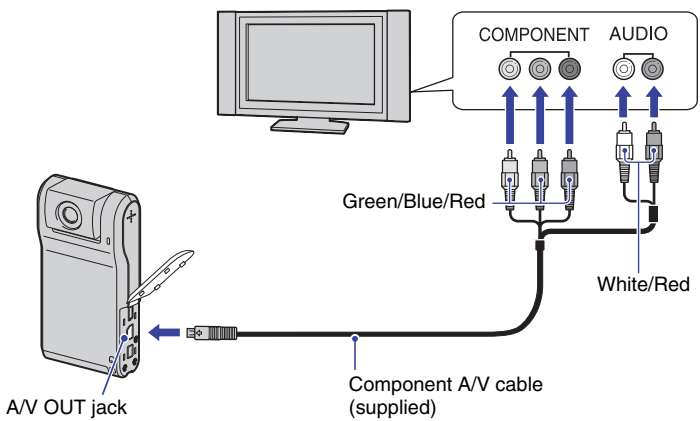
Viewing images on a TV

You can view images on a TV screen by connecting the camera to a TV.
The connection or the image quality (HD (high definition)/SD (standard definition)) varies depending on the type of TV or input jacks the camera is connected to.

- When using your camera abroad, it may be necessary to switch the video signal output to match that of your TV color system (page 57).
- Image will not be displayed on the LCD screen when an image signal is output to TV.

Connecting to a high definition TV

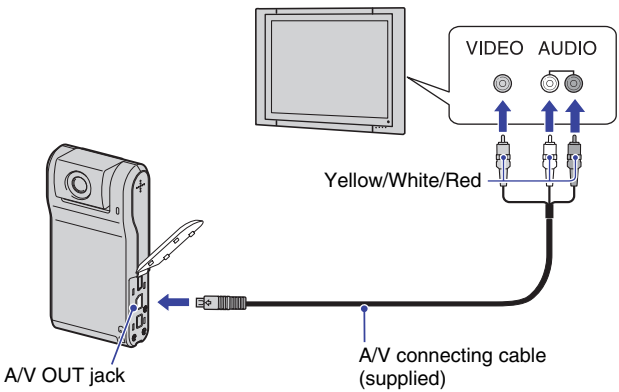
Images recorded with HD (high definition) image quality are played back with HD (high definition) image quality. Images recorded with SD (standard definition) image quality are played back with SD (standard definition) image quality.



- If you connect only component video plugs, audio signals are not output. Connect the white and red plugs to output audio signals.
- The output settings switches automatically according to the images played back. Therefore, the image may be distorted when switching the mode on the connected TV.
- If you record movies in HD (high definition) image quality [1080 30P/720 30P] while connecting the camera to a high definition TV with a component cable, the image output to the TV is shown in SD image quality.

Connecting to a non-high-definition 16:9 (wide) or 4:3 TV

Images recorded with HD (high definition) quality is converted to SD (standard definition) and played back. Images recorded with SD (standard definition) image quality are played back with SD (standard definition) image quality.



- During playback of a movie at HD (high definition) on SD (standard definition) TV, the movie is displayed with black space on the upper and lower sides.

When connecting to your TV via a VCR

Connect your camera to the LINE IN input on the VCR using the A/V connecting cable. Set the input selector on the VCR to LINE (VIDEO 1, VIDEO 2, etc.).

When your TV is monaural (When your TV has only one audio input jack)

Connect the yellow plug of the A/V connecting cable to the video input jack and connect the white (left channel) or red (right channel) plug to the audio input jack of your TV or VCR.

On TV color systems

If you want to view images on a TV screen, you need a TV with a video input jack and the A/V connecting cable. The color system of the TV must match that of your camera. Check the following lists for the TV color system of the country or region where the camera is used.

NTSC system

Bahama Islands, Bolivia, Canada, Central America, Chile, Colombia, Ecuador, Jamaica, Japan, Korea, Mexico, Peru, Surinam, Taiwan, the Philippines, the U.S.A., Venezuela, etc.

PAL system

Australia, Austria, Belgium, China, Czech Republic, Denmark, Finland, Germany, Holland, Hong Kong, Hungary, Italy, Kuwait, Malaysia, New Zealand, Norway, Poland, Portugal, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Thailand, United Kingdom, etc.

PAL-M system

Brazil

PAL-N system

Argentina, Paraguay, Uruguay

SECAM system

Bulgaria, France, Guiana, Iran, Iraq, Monaco, Russia, Ukraine, etc.

Troubleshooting

If you experience trouble with your camera, try the following solutions.

❶ **Check the items on pages 62 to 65.**

❷ **Turn the power off, and turn it on again after about one minute.**

❸ **Consult your Sony dealer or local authorized Sony service facility.**

When repairing the camera, we may check a minimum amount of data stored on the internal memory in order to improve the condition. However, Sony dealer will neither copy nor save your data.

Click one of the following items to jump to the page explaining the symptom and cause or the appropriate corrective action.

Battery and power 62

Shooting still images/movies 62

Viewing images 63

Deleting/Editing images 64

"Memory Stick PRO Duo" media 64

Internal memory 65

Others 65

Battery and power

Cannot turn on the camera.

- The battery is discharged. Charge the battery (page 16).
- Check whether the battery is inserted in the correct direction (page 18).

The power turns off suddenly.

- If you do not operate the camera for about five minutes while the power is on, the camera turns off automatically to prevent wearing down the battery. Turn on the camera again.

The battery remaining indicator is incorrect.

- This phenomenon occurs when you use the camera in an extremely hot or cold location.
- The displayed battery remaining differs from the current one. Fully discharge and then charge the battery to correct the display.
- The battery is discharged. Charge the battery.

Shooting still images/movies

Your camera cannot record images.

- Check the free capacity of the internal memory or “Memory Stick PRO Duo” media. If it is full, do one of the following:
  – Delete unnecessary images (page 33).
  – Change the “Memory Stick PRO Duo” media.
- Continuous shooting is possible for approximately 25 minutes.
- Press ▶ (Play) button and set the camera to shooting mode to shoot a still image or a movie.

The LCD screen does not display the still images or movies you are shooting.

- Your camera is set to the playback mode. Press ▶ (Play) button to change to the shooting mode (page 26).

Anti-blur function does not work.

- The anti-blur function does not work when shooting still images.
- The anti-blur function may not work properly when shooting night scenes.
- The anti-blur function does not work when the movie size is [1080 30P].

Recording takes a long time.

- The NR slow shutter function is activated. This is not a malfunction.

The date and time are not displayed on LCD screen.

- While shooting, the date and time are not displayed. They are displayed only during playback.

The recording date is not superimposed on an image.

- This camera does not have a feature for superimposing dates on images.

The screen is too dark or too bright.

- Select the brightness of the LCD backlight (page 53).

Noise appears in the image when you view the screen in a dark place.

- The camera is attempting to increase the visibility of the screen by temporarily brightening the image under conditions of low illumination. There is no effect on the recorded image.

Dots appear and remain on the screen.

- This is not a malfunction. These dots are not recorded (page 3).

Cannot shoot images in succession.

- The internal memory or “Memory Stick PRO Duo” media is full. Delete unnecessary images (page 33).
- The battery level is low.

Viewing images

Your camera cannot playback images.

- Press ▶ (Play) button to change to the playback mode (page 31).
- The folder/file name has been changed on your computer.
- When an image file has been processed by a computer or when the image file was recorded using a model other than that of your camera, playback on your camera is not guaranteed.
- The camera is in USB mode. Delete the USB connection.

The date and time are not displayed.

- The display indicators are turned off. Show the display indicators by tilting the multi-selector to ▲ (DISP) (page 28).

The image appears rough right after playback starts.

- The image may appear rough right after playback starts due to image processing. This is not a malfunction.

The image does not appear on the TV screen.

- Check [Video Out] to see if the video output signal of your camera is set to the color system of your TV (page 57).
- Check whether the connection is correct (page 58).
- If the USB cable is connected to the camera and the computer, disconnect it.

You cannot view the image or hear the sound on the TV.

- When you are using the component video plug, make sure the red and white plugs of the A/V connecting cable are connected (page 58).

The top, bottom, right, and left edges of images may be trimmed slightly when you play back on a connected TV.

- The LCD screen of the camera can display recording images across the entire screen (full pixel display). However, this may cause slight trimming of the top, bottom, right, and left edges of images when played back on a TV which is not compatible with full pixel display.

When connecting to TV with A/V connecting cable, the image is displayed with black space on the upper and lower sides.

- This happens when viewing an image recorded at HD (high definition) on a 4:3 TV. This is not a malfunction.

The image recorded at HD (high definition) appears distorted.

- Set the wide mode of the TV to display the image recorded in the 16:9 mode correctly.

Deleting/Editing images

Your camera cannot delete an image.

- Cancel the protection (page 41).

“Memory Stick PRO Duo” media

Cannot insert “Memory Stick PRO Duo” media.

- Insert it in the correct direction.

You have formatted “Memory Stick PRO Duo” media by mistake.

- All the data on the “Memory Stick PRO Duo” media is deleted by formatting. You cannot restore it.

Internal memory

Cannot playback or record images using the internal memory.

• There is “Memory Stick PRO Duo” media inserted in the camera. Remove it.

Cannot copy the data stored in the internal memory to “Memory Stick PRO Duo” media.

• The “Memory Stick PRO Duo” media is full. Check the capacity.

Cannot copy the data on the “Memory Stick PRO Duo” media or the computer to the internal memory.

• Data on “Memory Stick PRO Duo” media or a computer cannot be copied to the internal memory.

Others

The lens gets fogged.

• Moisture condensation has occurred. Turn off the camera and leave it for about an hour before using it.

The camera becomes warm when you use it for a long time.

• This is not a malfunction.

The Clock Set screen appears when you turn on the camera.

• Set the date and time again (page 57).

You want to change the date or time.

• Set the date and time again (page 57).

Warning indicators and messages

Messages

If the following messages appear, follow the instructions.

- The battery level is low. Charge the battery immediately. The indicator may flash even if there are still 5 to 10 minutes of remaining battery time left.

No Memory Stick

- Insert “Memory Stick PRO Duo” media (page 18).

System error

- Turn the power off and then on again.

Internal memory error

- Turn the power off and then on again.

Reinsert the Memory Stick

- Insert the “Memory Stick PRO Duo” media correctly (page 18).
- The inserted “Memory Stick PRO Duo” media cannot be used in your camera (page 69).
- The “Memory Stick PRO Duo” media is damaged.
- The terminal section of the “Memory Stick PRO Duo” media is dirty.

Memory Stick type error

- The inserted “Memory Stick PRO Duo” media cannot be used in your camera (page 69).

Cannot access Memory Stick Access denied

- You are using a “Memory Stick PRO Duo” media with the access controlled.

Format error

- Format the media again (page 50).

No memory space

- Delete unnecessary images or files (page 33).

Read only memory

- Your camera cannot record or delete images on this “Memory Stick PRO Duo” media.

No file in this folder

- No images have been recorded in this folder.
- You did not operate correctly when copying images from your computer.

Folder error

- A folder with the same first three digit number already exists on the “Memory Stick PRO Duo” media (for example: 123MSDCF and 123ABCDE). Select other folders, or create a new folder (pages 50, 51).

Cannot create more folders

- The folder with a name beginning with “999” exists on the “Memory Stick PRO Duo” media. You cannot create any folders if this is the case.

Cannot record

- The camera cannot record images in the selected folder. Select a different folder (page 50).

File error

- An error occurred while the image was playing back.

File protect

- Release the protection (page 40).

Image size over

- You are playing back an image with size that cannot be played back on your camera.

Invalid operation

- You are trying to playback a file that is not compatible with the camera.
- You have selected a function that is not available for movies.

Turn the power off and on again

- A problem with the lens caused an error.

Unsupported data

- The data is unsupported by the camera and cannot be played back.

To use your camera abroad — Power sources

You can use your camera and the BC-CSK/BC-CSKA battery charger (supplied) in any country or region where the power supply is within 100 V to 240 V AC, 50 Hz/60 Hz.

- **Do not use an electronic transformer (travel converter), as this may cause a malfunction.**

On the “Memory Stick” media

“Memory Stick” media is a compact, portable IC recording medium with a large data capacity.
You can use the following types of “Memory Stick” media listed below on this camera. However, we do not guarantee the operation of all types of “Memory Stick” media on your camera. (See the list below for more details.)

Types of “Memory Stick” media	Recording/ Playback
“Memory Stick Duo” media (with MagicGate)	—
“Memory Stick PRO Duo” media	○
“Memory Stick PRO-HG Duo” media	○*

* Your camera does not support an 8-bit parallel data transfer. A 4-bit parallel data transfer, as same as “Memory Stick PRO Duo” media, is supported.

- Your camera cannot record or play data that uses “MagicGate” technology. “MagicGate” is a copyright protection technology that records and transfers the contents in an encrypted format.
- Your camera is compatible with “Memory Stick Micro” (“M2”) media. “M2” is the abbreviation for the “Memory Stick Micro”.
- “Memory Stick PRO Duo” media formatted by a computer (Windows OS/Mac OS) does not have guaranteed compatibility with your camera.
- Data read/write speed may vary depending on the combination of the “Memory Stick PRO Duo” media and “Memory Stick PRO Duo” media compliant product you use.
- Damaged or lost image data will not be compensated for, and may occur in the following cases:
  - If you eject the “Memory Stick PRO Duo” media or turn the power off on your camera while your camera is reading or writing image files on the “Memory Stick PRO Duo” media (while the access lamp is lit or flashing).
  - If you use the “Memory Stick PRO Duo” media near magnets or magnetic fields.
- It is recommended you make a back-up of important data on the hard disk of a computer.
- Be careful not to apply excessive force when writing on a memo area on“Memory Stick PRO Duo” media.
- Do not attach a label or the like on “Memory Stick PRO Duo” media or a “Memory Stick Duo” media adaptor.
- When you carry or store “Memory Stick PRO Duo” media, put it in its case.
- Do not touch, or allow metallic objects to come into contact with the terminals.
- Do not bend, drop or apply strong force to the “Memory Stick PRO Duo” media.
- Do not disassemble or modify the “Memory Stick PRO Duo” media.
- Do not let the “Memory Stick PRO Duo” media get wet.
- Be careful to keep “Memory Stick PRO Duo” media out of the reach of small children. There is danger that a child might swallow it.
- Do not insert anything other than “Memory Stick PRO Duo” media into the “Memory Stick Duo” media slot. Doing so may cause a malfunction.
- Do not use or keep the “Memory Stick PRO Duo” media in the following locations:
  - Places subject to extremely high temperature, such as a car parked outside in the summer.
  - Places under direct sunlight.
  - Places with extremely high humidity or subject to corrosive gases.

On the “Memory Stick Duo” media adaptor

- When using “Memory Stick PRO Duo” media with a “Memory Stick” media compliant device, be sure to insert the “Memory Stick PRO Duo” media into a “Memory Stick Duo” media adaptor.
- When inserting “Memory Stick PRO Duo” media into a “Memory Stick Duo” media adaptor, make sure the “Memory Stick PRO Duo” media is inserted facing in the correct direction, then insert it all the way in. Note that improper use may cause a malfunction. Also, if you force the “Memory Stick PRO Duo” media into the “Memory Stick Duo” media adaptor in the wrong direction, it may be damaged.
- Do not insert a “Memory Stick Duo” media adaptor without “Memory Stick PRO Duo” media attached. Doing so may result in malfunctions of the unit.

On “Memory Stick PRO Duo” media

- The maximum memory capacity of “Memory Stick PRO Duo” media that can be used on your camera is 16 GB.

Notes on using “Memory Stick Micro” media

- To use “Memory Stick Micro” media with this camera, you need a Duo-sized M2 Adaptor. Insert the “Memory Stick Micro” media into the Duo-sized M2 Adaptor, then insert the adaptor into the “Memory Stick Duo” media slot. If you insert “Memory Stick Micro” media into this camera without using a Duo-sized M2 Adaptor, you might not be able to remove it from the camera.
- Do not leave the “Memory Stick Micro” media within the reach of small children. They might accidentally swallow it.

On image data compatibility

- Image data files recorded on “Memory Stick PRO Duo” media by your camera conform to the “Design rule for Camera File system” universal standard established by the JEITA (Japan Electronics and Information Technology Industries Association).
- On your camera, you cannot play back still images recorded on other devices that do not conform to the universal standard. (These models are not sold in some regions.)
- If you cannot use “Memory Stick PRO Duo” media that has been used with another device, format it with your camera (page 50). Note that formatting erases all information on the “Memory Stick PRO Duo” media.
- You may not be able to play back images with your camera:
  - When playing back image data modified on your computer.
  - When playing back image data recorded with other devices.

On the battery

On charging the battery

We recommend charging the battery in an ambient temperature of between 10°C to 30°C (50°F to 86°F). You may not be able to efficiently charge the battery outside of this temperature range.

Effective use of the battery

- Battery performance decreases in low temperature surroundings. So, the time that the battery can be used is shorter in cold places. We recommend the following to ensure longer battery use:
  - Put the camera in a pocket, etc. to warm it up before using.

How to store the camera

- If the camera is not to be used for a long time, to maintain its function, fully charge the internal battery and use it up at least once a year, then store the camera in a dry, cool place.
- To use the battery up, leave your camera in slide show (page 43) playback mode until the power goes off.

On battery life

- The battery life is limited. Battery capacity decreases little by little as you use it more and more, and as time passes. If the battery operating time seems shortened considerably, a probable cause is that the battery has reached the end of its life. Contact your Sony dealer or local authorised Sony service facility.
- The battery life varies according to how it is stored and the operating conditions and environment.

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